The Darknet Mesh Project

David Ford, OxCERT (University Of Oxford)

Project is a collaboration between several UK Universities

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- Concept of a Darknet will be familiar to many
- Address space assigned to yourselves that is unused
- Can be used to detect various forms of malicious traffic

However...

- Per site/organisation Darknet usage brings benefits

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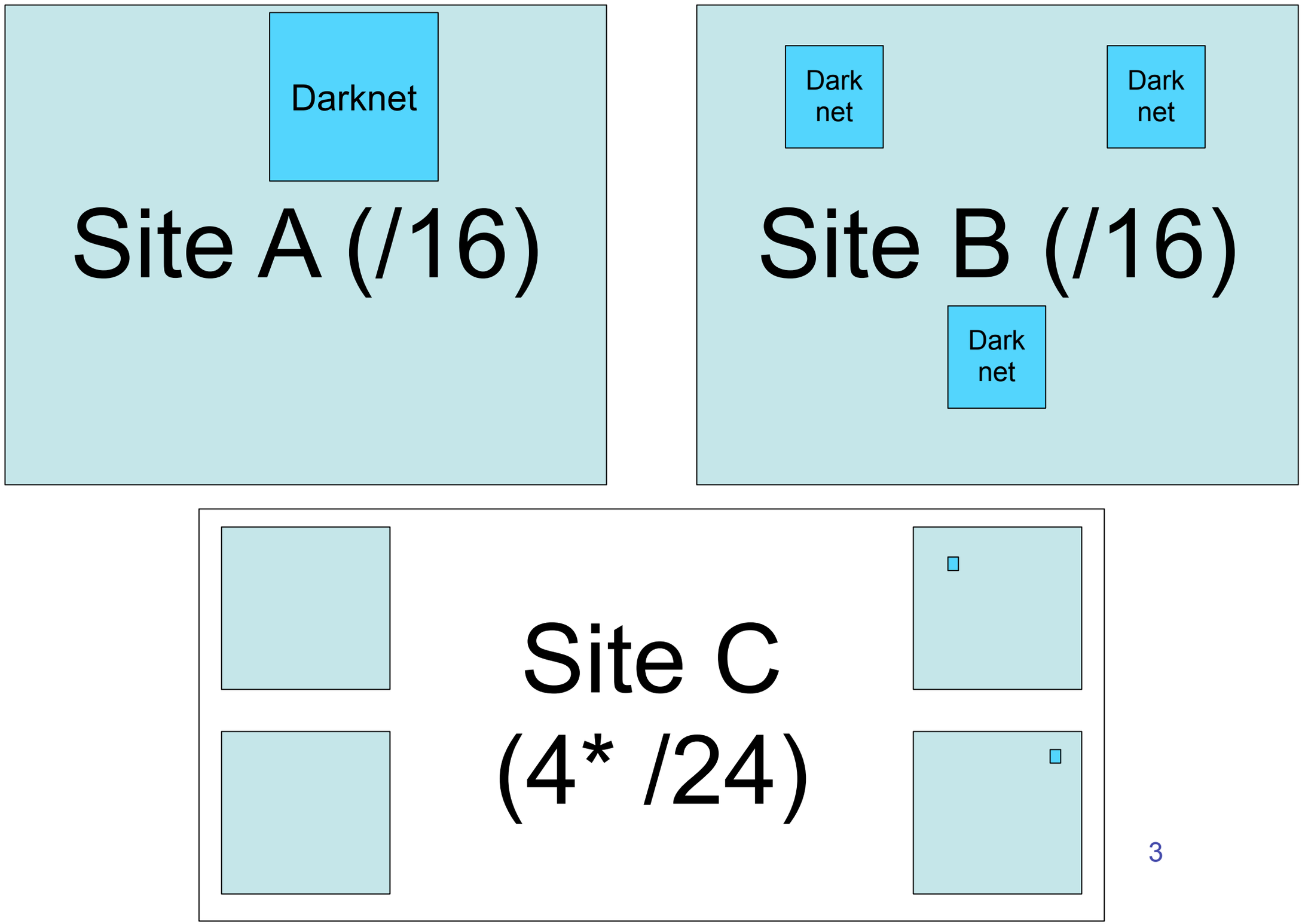
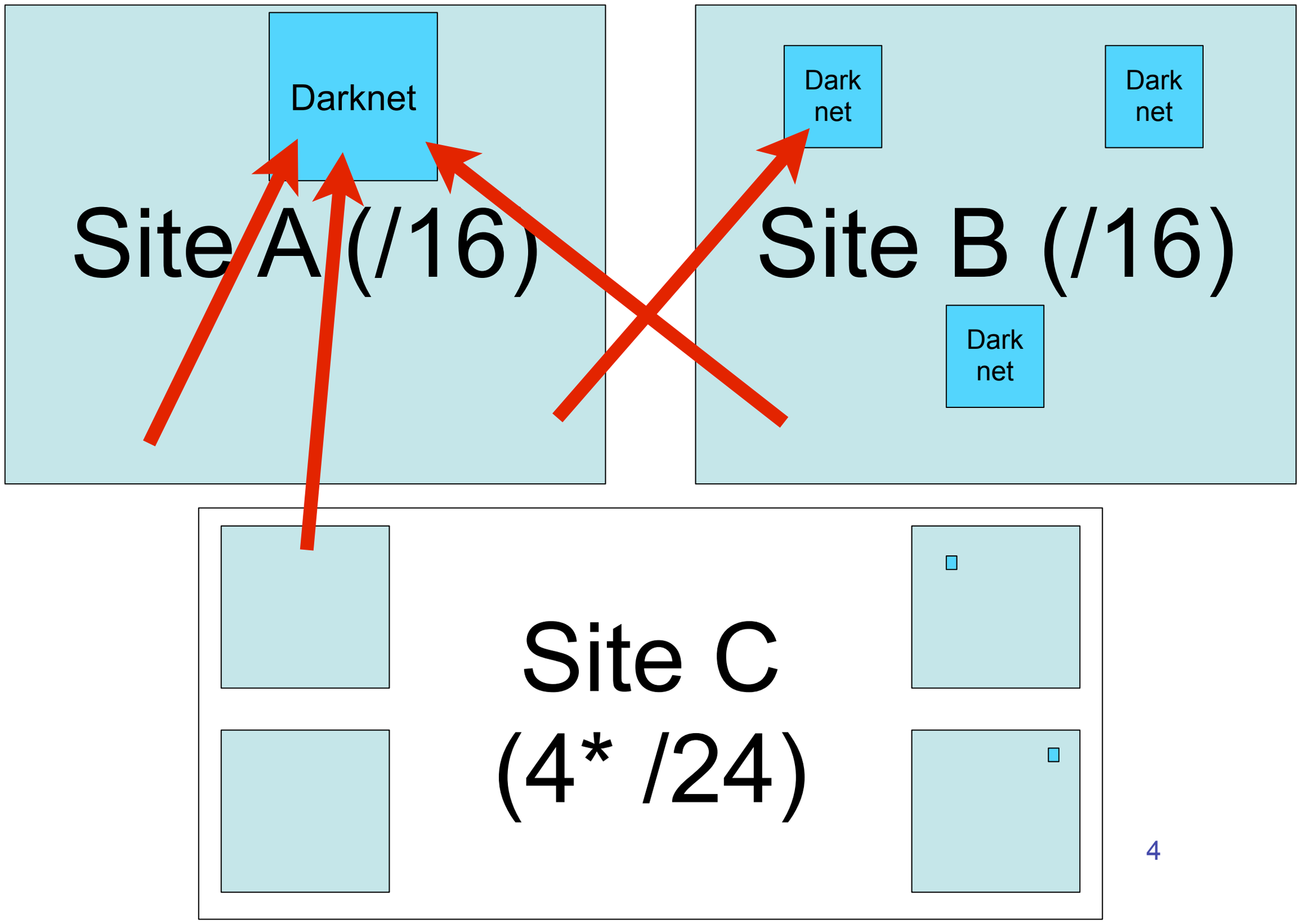
- IPv4 Exhaustion makes obtaining “virgin” IP Space Hard
- Scanners tend not to confine themselves to your IP space any more - random scanning more likely than systematic

Example (not to scale)




Darknet
Site A (/16)
Dark net
Dark net
Site B (/16)
Dark net
Site C
(4* /24)

Oxford University Computing Services

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- Sites B and C might continue in blissful ignorance of a problem
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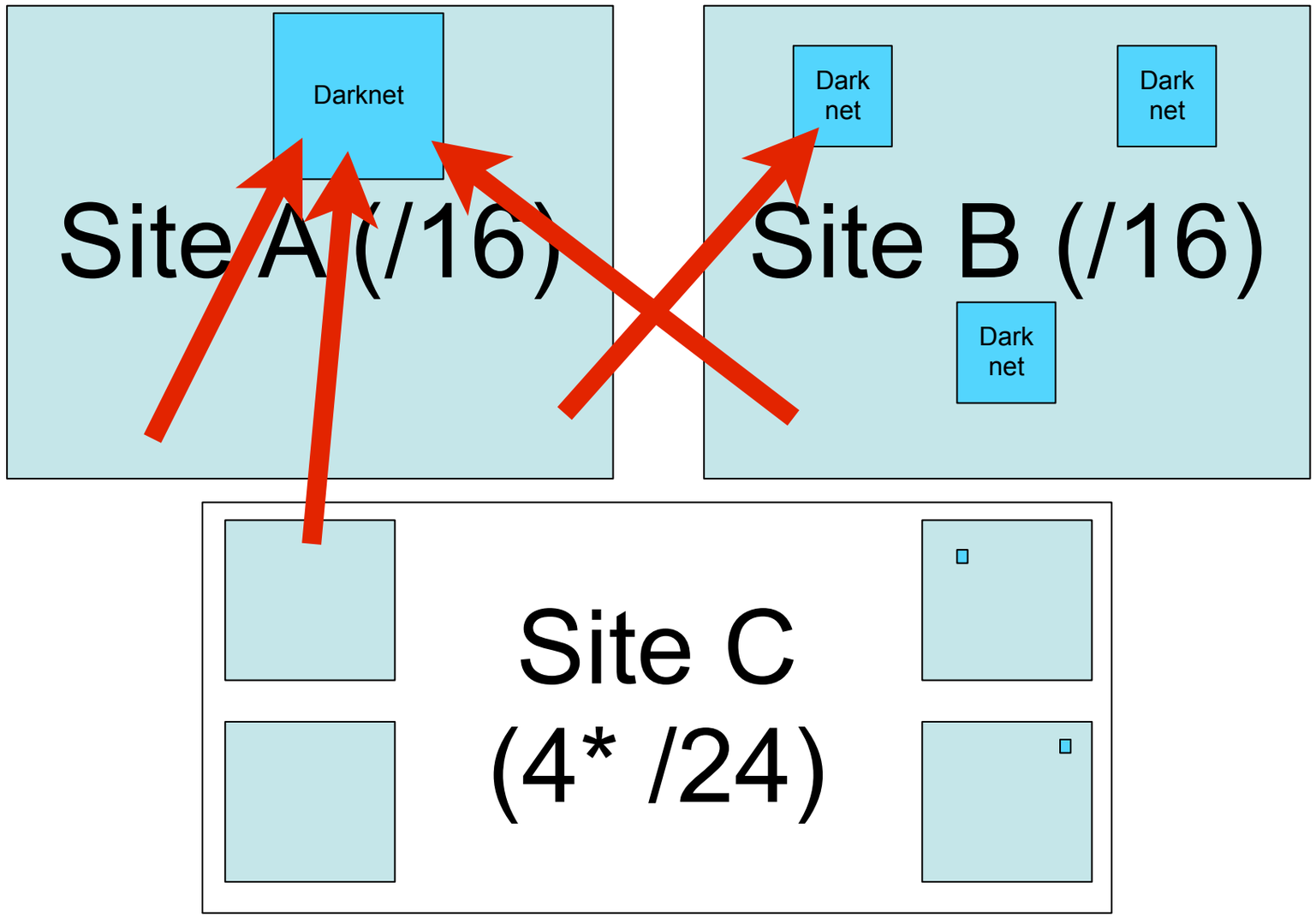
- Our approach is to centralise only the registry of netblocks and contacts (and to have a failover if the update is unavailable)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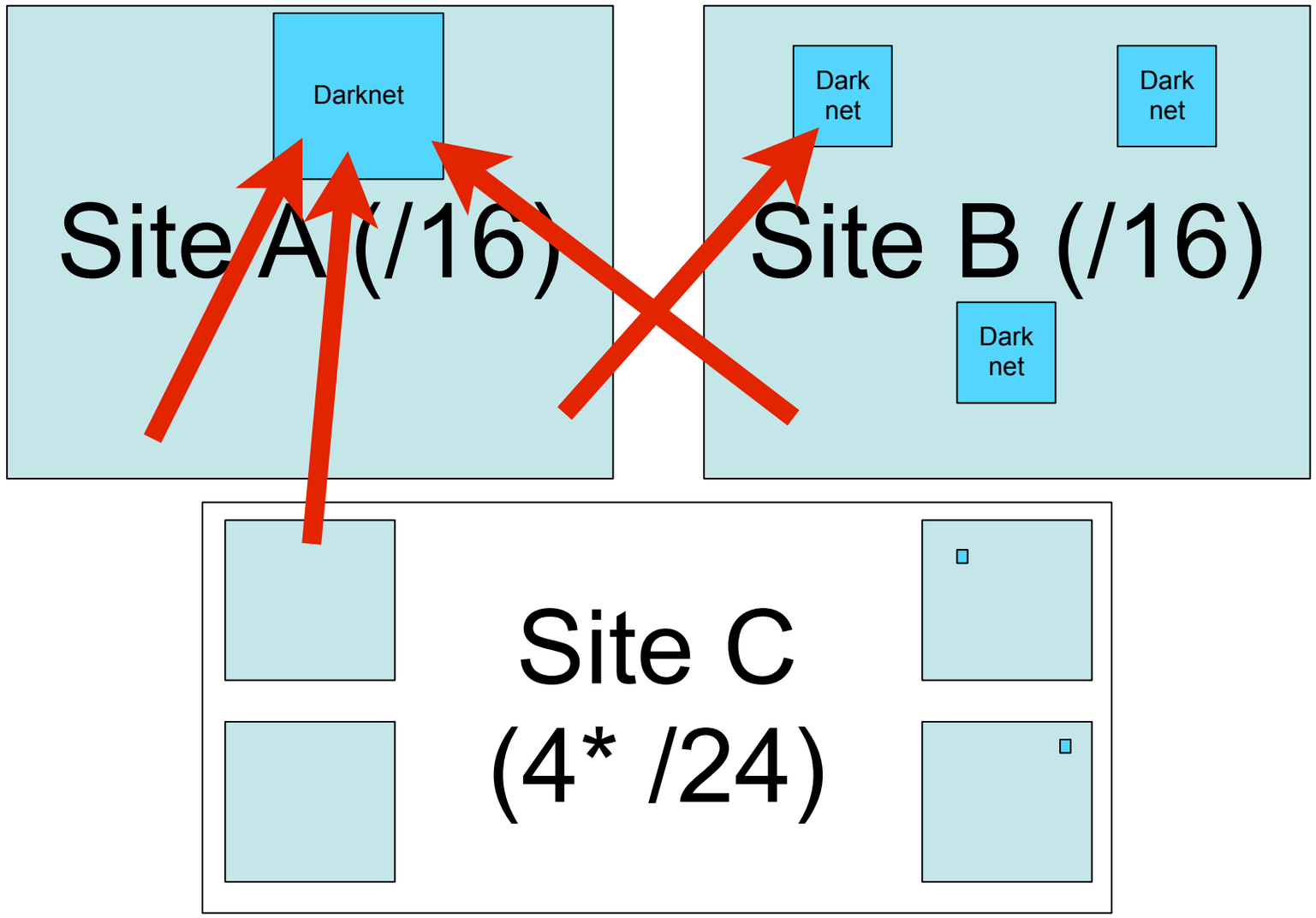
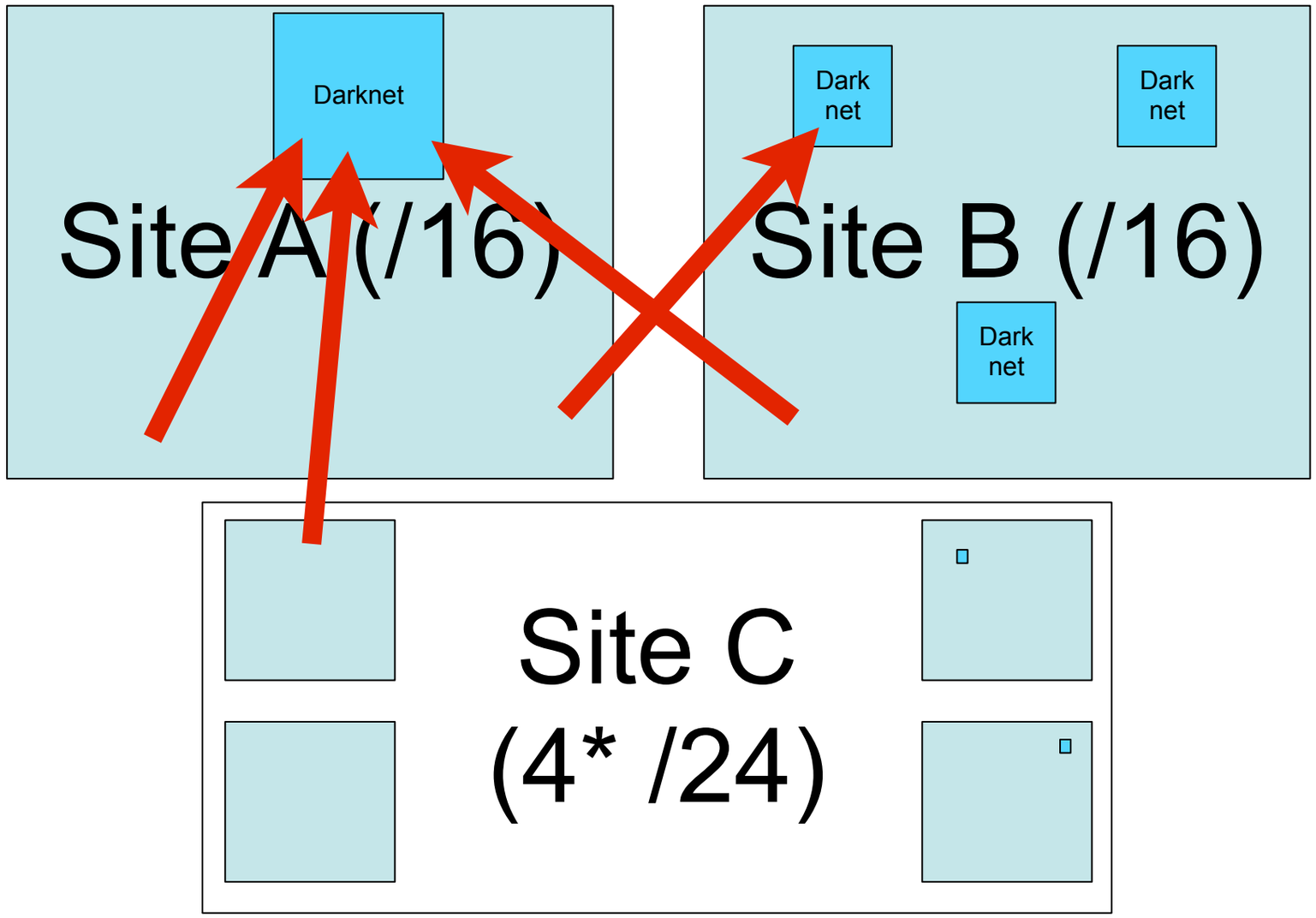


- Each Site knows Sites A, B, C's address ranges and a contact, when the sensor sees traffic it contacts the site contact



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- notification is near instant to the remote site

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- Code is freely available so it is possible to either set up your own mesh, or we would consider hosting a wider mesh than currently